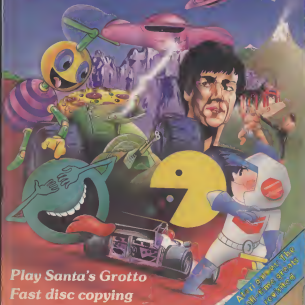


A Database Publication

ATARI USER

Vol. 2 No. 8 December 1986 £1

Inside
this
issue



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Fast disc copying

Atari games: The
off-time greats
reviewed

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Red Rat Software

11 FENNEL STREET, MANCHESTER, M4 3DU



Triple mode design

Two new Atari 1600 games will debut 2000 games without requiring an adapter and do open design allows it to accept a wide range of peripherals

The system memory has two 256 x 8 bit static ram chips and one 128 x 8 ram

ram chips are housed using the original RAMCOS2000 and RAMCOS1000 integrated in the triple graphic chip

The machine runs in three distinct modes - standard and Atari mode and 2800 compatibility mode

The system automatically decides which mode to run in depending on the cartridge plugged into the slot when power is turned on

As for the 2800 system, it also runs from the custom TIA chip possibly aided in with the DAUS signal from the cartridge

The video may come from either of two sources, TIA or Atari. When operating in compatibility mode the 2800 system runs off the Atari chip and all video output remains low

The keyboard connects via the physical port. Video resolution in pixels is 320 by 192

The machine offers improved graphics and game play compared with the 2800 system and somewhat performance over the AT line, says Atari

It doesn't require an adapter to take 2800 cartridges and it will be launched with a full line of software titles

Show debut for games machine

AN exciting new Atari games machine will be unveiled at the Atari Christmas Show in London.

The Royal Horticultural Hall Westminster has been chosen as the venue for the UK launch of the Atari 2800 - less than a month after its debut in America

Atari describes the Atari 2800 as "which is expected to carry a price of £295.00 - as a confirmation of our commitment to the games market"

The machine is intended to answer long standing criticism that the company has been neglecting its loyal army of games enthusiasts in favour of its computer operations - in particular the ST series

The new machine which is due in the shops before Christmas is expected to revitalize Atari's software production

A large number of new games will be available by the time the 2800 arrives in the shops as Atari customers are promised

Software houses are

committing to development and plenty of software will be coming from US developers

The 2800 will be the centrepiece of Atari's major presence at the Christmas Show which runs from Friday, November 28 to Sunday November 30

The company has promised that visitors will be able to try hands on experience of the new machine as well as getting a chance to add to their graphics

Bargains

Atari has been accused of ignoring £100 sales in favour of the 16 bit ST but they have not been forgotten now UK gets an alternative to the US Atari Lynx

We have now software for them and this will be on display at the show

Together more than 100 models will be loaded with new products and bargains from the leading Atari suppliers

The special 20,000 sq ft exhibition hall will play host to big names like Software Express, Tiverton, CDS, Microsoft and Advanced Sys

tems & Technologies as well as Atari itself

This means the location is likely to see a record of the scores at the first Atari Computer Show last March which attracted 16,000 visitors

Latest range of product launches at the show includes Prophecy from The Moving Finger Company

This look-up utility lets users make working copies of all their ST software as well as formatting and copying disks and runs £34.95

Elsewhere will be offering two co-ordinated graphics and sound packages for the ST - Prophecy Designer prices £29.95 and Prophecy Designer at £45.95

The firm is also launching Mailroom, a new course package offering access to both Postal and Telecom Gold as well as supporting Amos and Excel products Price £29.95

Microsoft ships and double floppy drives for the ST will be available for £125 and £160. A 20Mb hard disk and incorporating fully dual co-ordinated software and desktop accessories costs £285

NEW UK SALES CHIEF

ANOTHER former Commodore executive has joined the Atari UK management team

Paul Welch has been appointed UK sales manager, a position similar to the one he held at Commodore before leaving a year ago to become a

mail order software dealer

Welch follows former Commodore colleague Bob Glaslow to Atari. Glaslow now Atari UK general manager, was Commodore's UK general manager when Welch joined the company in 1981 as national accounts manager

The two men struck up a rapport at Commodore and it was Glaslow's recent move to Atari which tipped the scales away from two other attractive job offers Welch was considering

Interviewed by Atari Data

Welch revealed he had been offered the Atari sales head position two years ago but had turned it down

Now that Bob Glaslow has joined Atari it's a different proposition, he said

We had a good working relationship at Commodore and I'm sure we can make things happen for Atari

Welch intended to make Atari the premier brand in the UK, many market areas more concentrated on ensuring our machines are fully supported by top quality products

All programs brought in Atari User are now available for free downloading on MicroLink, the UK's fastest growing electronic mail service. They join hundreds of programs already available on the MicroLink service, one of the most popular sites of MicroLink

BUMPER TO BUMPER

CLASSIC control with a cut-throat game, the classic video treatment in Virtual Reality from Midway for the Atari ST.

In addition to the game of pinball, players can also design build and edit their own screens. They can create their total pinball machine, choosing from a multitude of bumpers, balls and other devices and placing them wherever they like.

Then, using a graphics drawing system, walls and wind barriers can be added.

The playing board can be illustrated with pictures, images and other designs which the ball will pass over during play.

Any of the ST's 16 colours can be changed as desired while the ball is in progress and there is a choice of more than 500 different shades.

Designs can be saved and loaded to disc. Price including sample, ready-to-play screen £29.95.

Easier payrolls

A PAYROLL package for the Atari ST has been released by Kyle Data.

Kyle Data is designed so that all PAYE National Insurance and employer sick pay information need only be updated once irrespective of the number of payrolls on the system.

Separate weekly and monthly payrolls for a number of companies can be held on the same disc.

Each payroll has its own files and password protection but all share system PAYE NI and SSP parameters.

A variety of payment methods, periods and methods is possible. Employees can be credited on hourly, piecework, payments can be made weekly or monthly by cash, credit transfer or cheque.

Standard payments and deductions are held on file and pay details can be printed manually or automatically. Price £195.

ON-LINE TO NORTH POLE

MESSAGES to Father Christmas need not depend on the efficiency of the postal service this year.

To ensure that every child can contact him before his big day, the jolly old fellow has gone on line up at the North Pole.

Equipped with an Atari micro machine, Santa has hooked up his workshop to the giant MicroLink

computer in the UK.

Now all the children - or their parents - have to do to connect him is to dial his direct message via modem and modem.

SantaLink is the latest use also being offered through the country's fastest growing also telex, mail and messaging systems.

All MicroLink subscribers

have to type SANTA in the prompt until they go on line and then until their message. The system takes care of the rest. And when Santa has put into the computer's memory what he has to do, he will be delivered personally, right up to Christmas Eve when he leaves to deliver everyone's presents.

Package for pros

A MUSIC sampling system for the ST has been launched by Synchrone Music.

The ADAP (Analogue to Digital, Audio Processor) SoundPack allows the user to store up to 64 multi-samples in memory for instant playback and incorporate real-time digital effects processing - delay, echo, reverb and envelope.



following. The package, which is aimed at music, video and broadcast professionals, is already used by top artists. Chicago and the Pointer Sisters. Price £2,495.

Data back-up

ATARI software producer Microflex has brought out a utility providing data back-up protection for ST hard drive owners.

Backup duplicates the contents of the user's hard drive to floppy discs minimising the risk of loss.

It also lets the user restore the floppy back onto the hard drive.

Backup uses Atari's pull-down menu to offer numerous options with different types of mouse controlled back-ups and restores.

Intelligent routines give the user the choice of making full back-ups of the entire hard drive, listings of newly created or modified files or back-ups simply by date.

The user can make an image back-up, transferring logical sectors to counterpart logical files. Price £39.95.

24 HOUR TURN ROUND

A new concept in desktop publishing from Lightning Graphics allows Atari ST users anywhere in the country to buy instant digital typesetting for as little as £5 per A4 page.

It is intended for companies and individuals involved in graphic design, printing and publishing who cannot afford the cost of high quality traditional typesetting.

With history on its playing a Southern newspaper chain.

Once on line, 24 hours a day, the normal 24-hour on-line service of the chain is available to the client by post or special courier.

Access

Lightning offers training and a manual along with £100 worth of free typesetting and access to its electronic mail system.

Text is typed in conventionally on the micro and stored off making up the copy the user wants, up to 100 copies, in the format.

These codes specify typesetting up to 100 copies, such as type size, type face and the length.

Copy is sent via electronic

All set to move up

ATARI believes it is poised to move into fourth spot in the UK home video chart.

Global executives at the company's HQ are celebrating. Industry reports that Atari's 1985 machine sales will soon replace the Commodore 16 on the rankings.

Latest figures show we are only a fraction behind fourth place right now", a spokeswoman told Atari News.

"We're confident that the current trend will continue and we'll be challenging Amstrad for third place soon."

"The overall picture confirms the progress that Atari has made to regain its pre-eminent position in the UK home marketplace."

"Instantly we are all delighted to hear that independent industry research portrays us in such a favourable light."

Record release

A **PARADISE** system for C programmers using the Atari ST has been released by Microdeal. Easy Record handles up to 16 indexed record files at one time, with eight key fields in each record file and eight subfields in each key field. Each key field has a maximum of 1023 bytes.

The system allows record access through a variety of logical functions and has a fast, multi-thread random record storage facility.

Transaction processing allows related files to be kept consistent with insert and end transactions functions.

Easy Record allows specification of key fields, supports key field values greater than 1000, adding open files and creation of files from definition files and/or blocks.

It also allows integer unaligned long float, double, string and date independent string key data types and C source code is included. Price £28.95.

Also new from Microdeal for the ST is **Myths Mail** a comprehensive mail-ordering database with GEM pull down menu price £28.95.

Movie music

SPECIALIST in computer software for the music industry (German based) Steinberg Research has begun distribution operations from new premises in California.

It has also distributed the first product for the Atari ST an add to synthesising music in film and television studios.

Called the **SMPTE** - Society of Motion Picture and Television Engineers - generator it will be heavily interactive with the revised Pro 24 programme - audio menu recorder - and connect to the ST via the **IS232** port.

The company claims this combination will set new standards in sequencing from time code. The **SMPTE** generator itself will be available separately for about £900.



Atari ST console panel

Christmas games roundup

A **VERSION** of the hit arcade game **Demolition** has been released for the ST by U.S. Gold.

The game which generated a lot of excitement when released in its original 80th in the arc format last year offers multi-player capabilities as well as sophisticated graphics.

A choice of four characters is available with 100 levels of difficulty.

The object is to smash waves of attacking monsters while competing for top status and magic points. Price £24.95.

Also new from U.S. Gold is the first in a series of **Masterquest** competitions. **Shoot 'Em Up** for the Atari 8 bit series features four previously released titles: **Super Dragon**, **Dragonair Blue Men**, **Exotic** and **Port Assault**. Complete price £9.95.

★★★

THE first two in a series of **Level 5** titles have been released for the ST and 8 bit machines by Rainbow Software.

Intensively re-written, **Jovials of Darkness** comprises three of the most popular Level 5 ST adventures - **Catastrophe**, **Adventure**, **Adventure Quest** and **Dungeon Adventure**.

The second package **Billow Dreams** features **Swampy Return**, **To Island and Worm** in Paradise all running on the 8 bit range as well as the ST. Both packages come with

plots with a 34-page novel incorporating a 12-page play guide.

Jovials of Darkness is available on disc price £19.95. **Billow Dreams** is available for the ST on disc price £19.95 and for the 8 bit series on disc or tape for £14.95.

★★★

YOU'll now ST games have been released by Microdeal.

Electronic Pool is a colourful video pool game featuring a high score table, realistic sound effects including real-time music. Price £18.95.

Pinball Factory allows the user to customise his own pinball games and save them to disc incorporating graphics

and other well sound effects £24.95.

Shuttle is a graphic simulation of the NASA spacecraft featuring music from the film **2001 A Space Odyssey**. The package costs £24.95.

Genie And Me is the game of the film.

As David LaFlamme the player must battle against powerful adversaries finally meeting the evil Chosen in the world of King Solomon where the secret of the dream must be discovered.

The program features fully animated screens and costs £24.95.

★★★

LATEST release from Gamers for the Atari 8 bit series is a version of the bestselling package **Trivial Pursuit Genius Edition**.

Offering all the features of the popular board game together with animated graphics the program is available on disc at £19.95 and cassette at £14.95.

A **Young Players Edition** is also available for the XL and XE at the same price.

★★★

All adventure games are for use on Level 5 software is to be held in Reading on Saturday December 13.

Owners of 8 and 16 bit machines are invited to attend the forum where Level 5 representatives will be offering adventure hints and tips and giving away free gifts.

The event will be held between 11am and 1pm at the Oxford Computer Store, Harle Arcade off Prior Street in Reading.



CARTOON favourites from the popular **Master of the Universe** television shows will feature extensive software for the Atari ST. A **Superhero** dual has been signed by Marvel and

US Steel to bring out separate arcade and adventure versions of a game starring **He-Man**, **Battle City** and **Steel** in their fight against the evil **Blizzard**.

An event NOT to be missed!

Atari Christmas Show

Royal Horticultural Hall
Westminster, London SW1

Friday November 28 10am-6pm
Saturday November 29 10am-6pm
Sunday November 30 10am-4pm

The first ever Atari Show last spring was an outstanding success. From all over Britain Atari enthusiasts flocked to London to find out all they could about their favourite machine.



Soon the record-breaking Atari Show will be back - with three days devoted to the exciting developments in this expanding market. Make a note in your diary NOW to make sure you don't miss this great Christmas extravaganza!

- All the latest software from publishers in both the UK and USA
- New hardware releases from Atari and other major companies
- Experts from Atari User and Atari ST User to answer your questions
- Experience the fascinating world of computer communications
- Everything on show from stocking fillers to complete Atari systems

Whether you're a new user or a seasoned addict, you'll find the show overflowing with ideas to help you expand your computing horizons!

They'll all be there!
Game consoles,
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... the whole
ST range!

This is YOUR chance to meet top people in the world of Atari. Among them will be experts from:

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Amiga Software	K&H Associates	Software Experts
Amiga User/Amiga ST User	Liamsoft	Software Store
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Compucon	Page One	

Bring this coupon to the Show to get 50p per person off the normal admission price of £3 (adults) £2 (children). Valid for up to four people.

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SHOW**

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Saturday, Nov 29, 10am-6pm
Sunday, Nov 30, 10am-4pm

Piccadilly Tube / Main Entrances / Victoria. Ample on parking nearby.

South Pacific

[illegible]

Are you an avid Internet gambler? Are you tired of the rig and bonuses of online casinos? **WHEEL** might be the best choice for you. It's a free, fun, and exciting way to play roulette.

Plans of this decade (prior to 1942) will not consider testing these storage practices in order to determine the capacity need to handle anticipated different growth.

You now have a Lockheed Lightning F-104 taking on the waves of Japanese fighters and bombers that came swooping in to you from the South Pacific.

Tom takes off from your letter saying that you're a liberal and that you're a liberal who's not a liberal.

© 2000 by John Wiley & Sons, Inc.

Herzogenhausen am 12. April 1904. *Sehr geehrte Herren!*

These points are made with particular regard to the Chinese people's right to self-determination and to the right to live in peace. In 1949, the year the great continental division took place, the Communists became

As these are reported by the speaker you usually are not being able to use them to any great advantage.

The larger it gets, takes a bit more killing and the bomber almost refuses to be shot down, which means using different strategies or different planes.

Fortunary all in red hair
for tomorrow the year is played
by what that planet's method is
it should be a suitable - when that
advantage, some (said)

Anybody requesting to speak at the meeting should let the press know it will be considered as it is confined to the lower quarter of the society.

The game is quite addictive with a definite feeling of "just one more on" whenever you

[illegible]

Consequently, the given letter should be in the position of the corresponding component.

The background is used as a design and styling to vary amount and the player average and how the score change.

Some places merely have the ability to fly backwards: locally clever, then, but unwise. But this doesn't really detract from the game.

Sound effects are good but an unimagined tone plays every in the background. However, it's not like the

Source: <http://www.fishbase.org>

Overall, *Scorching Wings* is a fairly average show, one that will keep you interested for a few hours but the lack of variety in later seasons and having only one final episode since your first played it is a bit like the original series.

Asking price is a negotiating
tool used before parting with your
money. **Adrian Alvarado**

the total	1
the population	1
the population	1
the population	1
the population	1
the population	1

Humble servant

1. $\mathcal{H}_1 = \{H_1, H_2, \dots, H_n\}$
 2. $\mathcal{H}_2 = \{H_1, H_2, \dots, H_n\}$
 3. $\mathcal{H}_3 = \{H_1, H_2, \dots, H_n\}$
 4. $\mathcal{H}_4 = \{H_1, H_2, \dots, H_n\}$
 5. $\mathcal{H}_5 = \{H_1, H_2, \dots, H_n\}$
 6. $\mathcal{H}_6 = \{H_1, H_2, \dots, H_n\}$
 7. $\mathcal{H}_7 = \{H_1, H_2, \dots, H_n\}$
 8. $\mathcal{H}_8 = \{H_1, H_2, \dots, H_n\}$
 9. $\mathcal{H}_9 = \{H_1, H_2, \dots, H_n\}$
 10. $\mathcal{H}_{10} = \{H_1, H_2, \dots, H_n\}$

The Service is in support of programs which address problems and solutions of age in 170s which will have results on capability of a group.

What you should read out your information on paper, explaining it as an idea as much as it is how you wish it to have out. Testing and saving your efforts is not the point here to do.

You can now define your business descriptions (which can be up to a full page) and messages (static and sales) more — up to 25% of each.

An excellent feature Eastern is available to provide a more detailed description of all the elements of the machine.

Each word or name can have several synonyms. Hereby access to the vocabulary.

The term *action* refers to the IQ tests to be defined for each population.

If you have any questions or comments, please contact us at info@hugoboss.com. We will be happy to help you.

Stores are pre-stocked for example: the number of items needed

To solve your adventure, a player will require someone else in the command to enter. To enter the logic for these responses you are given SAI. The *Glenn Adventure* has more.

SAL is a language akin to a powerful Basic. It has 73 main commands but these can be combined to give over 144 keywords, some of which



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After you have purchased all the necessary items, you are almost ready to bring them all together to form the finished product.

The *News* also includes a challenging program and a feature by design is complete the page using Graphics Software.

The 128 page manual thoroughly and carefully and in concise manner explains the use of the

1. The first part of the paper is devoted to a study of the properties of the function $f(x)$ defined by the equation $f(x) = \int_0^x f(t) dt$. It is shown that $f(x)$ is a continuous function and that $f(0) = 0$. The second part of the paper is devoted to a study of the properties of the function $g(x)$ defined by the equation $g(x) = \int_0^x g(t) dt$. It is shown that $g(x)$ is a continuous function and that $g(0) = 0$.

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

Score of 100	7
Classroom Participation	100
Classroom Leadership	80
Values for the day	100
Overall	80

Classic mould

Program: *Starquake*
Price: £19.99 (Suggested)
 £19.95 (used)
Distributor: Rainbow Row, 83, High Street, Farnborough, Hants, PO14 3BE
 Tel: 0747 263032

COME on, admit it. There must have been a time or two when you've cast an envious glance at those arcade adventures that ultimately for the Spectrum and wished they were available for your Atari.

No jealous no more. Bubble has now produced *Starquake*, an original program, but one that isn't graphically very much in the mould of those earlier Ultimate classics.

You control Blob, an outcast little clumping blob, and shoot the ruins of an alien planet and across various hells.

The planet you have gone off to, Blob's job is to find it full with the right objects and then stabilize it. At the wonders of modern tech notwith.

Blob is a delightfully computerised, carrying this role and that along time limits as he explores the planet.

Being subject to the normal rules of gravity, when he tumbles off the edge of a precipice he falls until he strikes the ground again. The damage is done unless he strikes something sticky on the way down.

His freedom can be slowed by putting back on the joystick. This causes a small platform to appear under him and stop him dead.

This facility can also be used on the ground – fast and repeated putting back on the joystick creates a ladder of these clumping platforms which can be used to getting at otherwise inaccessible places.

Blob can also get around by sliding on what looks like a white brass-block. Once on it he can fly mostly around the camera.

Another fun way of travelling is by using one of the



translucent bubble. To activate, you must guide Blob into a bubble, like in the case of any of the other bubble and bings, has there.

There are hundreds of different caves, each one a separate screen. Wander off the edge of the screen and another pops up.

The caves are filled with alien vegetation, machinery and really animated flying bats.

Energy is lost each time Blob is touched by an alien (but he can eat them), and he loses a life if he bounces into such fatal (unless he spunking machinery in a special part

Blob has 8 lives and a limited amount of energy, up and platform-building power.

Everything about *Starquake* is presented from the title screen to the high score table, from the use of colour and sound to responsiveness and playability.

Bubble has now produced a superb game. *Starquake* is top notch, fine quality dripping from every pore.

Bob Chappell

Sound	4
Graphics	4 1/2
Playability	5
Value for money	4 1/2
Overall	4 1/2

Modest tasks

Program: *Planet of the Fancys*
Price: £19.99 (Suggested)
 £19.95 (used)
Distributor: Rainbow Row, 83, High Street, Farnborough, Hants, PO14 3BE
 Tel: 0747 263032

FANCY doing something unusual today, like becoming an overlord of the universe? That's the modest task this text adventure sets you.

To achieve your ambition you have to go to get an out of order teleports, blobs, keys or weapons under.

The snag is that this world is ruled on a somewhat of hostile planet over 2000 light years away.

You start outside the opening Nebula which is full out of space – does nothing work in the rest of the galaxy? Finding out how to get the ship going is your prime task.

On the flight deck there is a control panel, terminal and workstation, but by its size

might only do some silly way of bringing them to life.

Up to the main drive until the deflector's freedom level seems pretty low – perhaps that's something to do with it.

A large part of the task possibly holds a clue but how do you get it open?

You could always try leaving the ship, like the wreck but that results in auto-death through lack of air.

Wearing a discarded space suit down, help, water – fear level is zero. This opening sequence should give you plenty to think about.

The display is fairly constant, your location goes like east and west, time are described in the top half of the screen, what is input and response appear in the lower half.

There is no scrolling – the screen stays, each time you execute an action that creates a new result.

The game's vocabulary

consists of 100 verbs and 180 nouns, commands being of the usual verb noun format.

It is a somewhat of the most elegant and the program helpfully tells you whether it is the verb or the noun that is not understood.

The descriptions are fully detailed and there are over 10 locations to explore.

The text is flexible, the game well organized and

describes the program being written in Basic, responses are in text.

Quest for Fantasy is an enjoyable if unoriginal adventure. At the price, well worth buying.

Bob Chappell

Sound	n/a
Graphics	n/a
Playability	7
Value for money	8
Overall	8



Four channel model controller

Part 7 of LEN GOLDING's series on using your Atari to control devices

If you've ever wanted to link your Atari to Lego and Meccano kits, slot-car races, miniature railways or computer-driven luggers this model controller is for you. It can even handle your Christmas Tree lights!

The controller provides independent on/off switching for up to four motors, relays, solenoids, or other low-voltage devices. It can also operate as a four-channel speed controller, or as a two-channel reversing switch so you can make a buggy move forwards/backwards, left or right at different speeds and

[illegible]

Each channel can drive a dozen porch bulbs for stripless floor displays, including chase lights - and there are even some linked applications in rotation.

Figure 1 gives the circuit in schematic form. Each of the four outputs is driven by a two-transistor power switch which enables the thyristor currents and voltages from the junction part to control currents of up to 8 amps and voltages of up to 24V at the outputs.

We explained translation switching policies briefly in the featured article of

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Figure 11 shows the printed circuit board pattern for those of you who want to etch your own (but, as usual, a commercially-made PCB is available from RSI Design).

The component layout is shown in Figure 11 and construction is very straightforward so that anyone can attempt it. Start by soldering the resistors and diodes, making sure the diodes are connected with their silver leads to the top. Then fit the 90108 transistor and all remaining diodes.

Blended the heads of each TFP2T
intermediate at right angles and merged

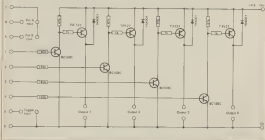
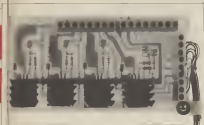


Figure 1. Diagram illustrating the relationship between the variables in the model.



them slightly to fit the PCB holes. Solder a small amount of silicon grease on the back of each transistor, then bolt the four transistors and heat-sink assemblies into place before soldering the leads.

Make sure that the heat-sink areas cannot touch each other or the gadget will not work properly.

Cut the joystick cable to length, desoldering the wires and then wire each of the nine leads to the appropriate point on terminal block 1, as indicated in Figure 11. Use a P clip to secure the joystick cable and take any strain.

Motors require far more current than a joystick can provide, so the next thing you need is some kind of low-voltage DC power supply. This design allows a very wide latitude—anything from 4.5V to 24V is acceptable.

At high output currents the voltage delivered to your load may be almost 1V less than the full supply voltage.

A properly stabilised mains power supply unit is fast, but there are expensive and not really necessary for things like motor solenoids, relays, lamps and other non-electronic devices. Battery alternatives intended for transistor radios or computers give good results, but the cheap ones often supply currents above 1 amp.

DC power packs designed for model railways, slot cars and conventional sets will work quite well and even a car battery charger should give acceptable results, though the output

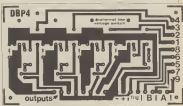


Figure 3: PCB full pattern (front & rev)

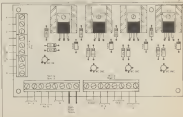


Figure 4: Component layout on reverse side of PCB

from all these devices tends to be variable.

A 12V car battery charger, for example, may deliver 18V or more under no-load or lightly-loaded conditions, falling to 12V or less when supplying several amps. These voltage fluctuations will affect the speed of most model motors, so you may find things tend to slow down as more channels are switched on.

If you plan to run one or other types of device — especially if you are considering running electronic units such as video or tape recorders — then it is best to stick to using properly regulated power supplies.

Lead-acid accumulators give a good clean, stable output and can supply extremely high currents but they need careful handling. Dry batteries are safest though expensive and rechargeable nickel-cadmium cells may be worth considering.

Whatever type of power supply you choose, its output must be wired to terminal block 2 as shown in Figure 11. Take great care not to reverse the positive and negative leads or you could damage the transistors.

Each output transistor can easily handle 1 amp continuously and up to 5 amps for periods of a few seconds. If you plan to drive steady currents above 1.5 amps you will need to use larger heat sinks.

Programming the device follows the familiar pattern. Start by setting up the Jyslink ports for output (first line of Program 1) then POK() a number from 0 to 15 into address 24016 to switch on your chosen combination of channels. Table 1 shows all the possibilities.

Program 1 is a simple daisy-chain switcher on each channel in turn, so if you connect a line of four spark bulbs you will see a chase effect.

An attractive coloured display can be made from an old set of Christmas tree lights. Assuming your set of lights takes 12V bulbs, you will find that there are 20 bulbs in the set wired in series. This means each bulb receives one twentieth of the 240V mains supply — or 12V.

On the first half-wave between each bulb, connect the bulb to each solder and reverse the bulb is parallel. You could use two different coloured bulbs on each of the channels and have an attractive multi-coloured light sequence for Christmas.

There is no reason, of course, why

Number on 24016	Channel 1	Channel 2	Channel 3	Channel 4
0	off	off	off	off
1	on	off	off	off
2	off	on	off	off
3	on	on	off	off
4	off	off	on	off
5	on	off	on	off
6	off	on	on	off
7	on	on	on	off
8	off	off	off	on
9	on	off	off	on
10	off	on	off	on
11	on	on	off	on
12	off	off	on	on
13	on	off	on	on
14	off	on	on	on
15	on	on	on	on

Table 1 Output switching from Port 1

```

1: REM Switches Port 01 1-channel on
   setting 00000
2: REM Program 1
3: REM
4: REM 0000, 0000, 00 0000 0000, 000 0000: 5
   0000, 00 0000 0000, 00 0000 00 0000
5: REM: set 00000
6: REM: repeat 0 to 15
7: REM switch on channel control num.
   on
8: REM 0000, 0000, 0000 0000 0000 00
   00 0000 00 0000 00 0000 0000 0000
9: REM: repeat
10: REM 0000 00
11: REM 0 to 4

```



1	2	3
00 00000	00 0000	00 0000
00 00000	00 0000	00 0000
00 0000	00 0000	00 0000

you shouldn't extend the wires with some two-core flex and run your Christmas tree lights from your Atari this year! Just remember to keep the bulbs in parallel with each other.

If you're using motors you can introduce an element of speed control by switching the power on and off in rapid pulses. Program 11 shows the conventional way of doing this using a variable mark/space ratio.

A short burst of power (the mark) is applied, followed by a short off period (the space). By choosing appropriate values for MARK and SPACE you can usually reduce a motor's speed by as much as eight times. Below its movement becomes too jerky.

Try for example setting MARK = 1 and SPACE = 8. Program 11 operates with channel 1 but you could apply the same principle to any of the channels.

Some applications — such as buggies and robot arms — need a controller which can change a motor's direction of movement. Most model motors can be reversed simply by changing the polarity of their supply leads, and Figure 12 shows

how to do this with Double Pole Double Throw — or DPDT — relays.

Each relay is run from two channels — one for the on/off function and the other to select forward or reverse. Any DPDT relay will work provided the coil and contact ratings suit your application.

An add-on PCB (GBF6) is available for use with two of Maplin's ultra-miniature relays which can each handle 3 amps at up to 24V. Choose the coil voltage which best suits your power supply — 6V types will operate on 4.5V to 7.5V while 12V types work on 9V to 18V.

The full pattern and layout for the PCB are shown in Figures 5 and 6. The 8-pin terminal block connects a pin-for-pin to terminal block 3 on the main board, using flexible wire or rigid piec-cut from 2.5 sq mm mains cable. Table 3 gives the numbers to POKS into 54016 for the various output operations in this mode.

You might like to consider building a Lego model tank with a separate motor for each track or a model car with some kind of servo to operate the steering. You could fit only one reversing relay and still have two

Number in 54016	Left Motor	Right Motor
0	off	off
1	off	off
2	forward	off
3	reverse	off
4	off	off
5	off	off
6	forward	off
7	reverse	off
8	off	forward
9	off	forward
10	forward	forward
11	reverse	forward
12	off	reverse
13	off	reverse
14	forward	reverse
15	reverse	reverse

Table 3: Outputs including those from Port 1

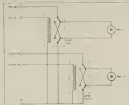


Figure 4: Circuit diagram of motor controller board

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1 000 000000 000 000 0 000000 000
2 000 00000 0
3 000
10 000 0000 00 000 00000 00000 000 000 0
11 000 00 000 0000 0
12 0000 000 00000000 0000 000 0
13 000 000 0000
14 000 0000 0000 0000 00 0000
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✓ *Get it right!*

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99
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Gadgets

That should give you plenty to think about over the Christmas holiday period. Why not try out some ideas of your own and let us know how you get on?

2001年12月15日

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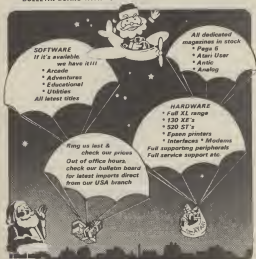
1	8-way performance blocks	PA200A
1	4-way performance blocks	PA200D
2	Ultra-wide area DPDT relays	PA200C (8-yr old)

Figure 1

[illegible]



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Bargain of the year

WHEN you wake up early on Christmas morning and reach out to stop the shadows by turning on your trusty laser lantern, what adventure will you hope to find stuffed in your battered leather knapsack at the foot of your pile of straw?

Perhaps you've already made up your mind. If not, get out a piece of your last parchment with your gold quill, write the words *Jewels of Darkness* on it, address it to Santa via the North Pole and shoot it straight up the chimney.

Who shouted that there's no such person as Santa Claus? How dare you call yourself an adventurer!

Published by Rainbird and available for both the ST and 8-bit Amiga computers, *Jewels of Darkness* is a collection of three superb early adventures from Level 9.

The trilogy comprises *Colossal Adventure*, *Adventure Quest* and *Dungeon Adventure*. All have been comprehensively updated to include graphics — no less than 800 coloured illustrations — a 1,000 word vocabulary, multi-command input, multi-tracking (type ahead regardless of what's happening on the screen) and incredibly fast response times.

Even without all that technological wizardry these adventures would still be among the best around. *Colossal Cave* is an all-time classic and this version is rated by many, including my humble self, as the finest ever. No self-respecting adventurer, worthy of the name, should be without it.

And just what king's ransom does the regal collection cost? I hear you ask in disbelief! My seven full efforts perch and stoop, died is aching when I told it as twice yours! For a shock.

For the 8-bit Amiga you get this imperial trilogy on three separate cassette, or one disc (handily boxed) complete with a 64 page novella for the incredibly low price of

£14.95. That's less than a fiver an adventure, not counting the smashing packaging and book. The ST version costs slightly more at £19.95.

So there you are. *Jewels of Darkness* has got to be the adventure bargain of the year. And Rainbird promises more of such delights. Watch this space.

To give you some more ideas for Christmas presents, whether for your

By Brillig

friends or yourself, I've listed my 20 favourites.

Plenty of large-sum titles there, but they happen to be the crown prizes in my book. Mindful no better reason for owning a disc drive than being able to play infamous adventures.

How to this month's hint and tip: Nigel Moore from Gonster wants to know how to deal with the snowfall and the dragon in *Reinbird*. A The Pawn Nigel's difficulties with the snowfall are dealt with in *House Of* Tips, but can anyone tell me how to get Nigel past the dragon?

Dragons have also stamped Eric Kelen of Dublin. These creatures seem to cause adventures more problems than anything else. Eric needs help with those in *Enchanter* and *Feasibility Experiment*. In the latter, he'd also like to know how to sign his lamp.

Eric has another problem — can anybody tell him where he can find the drum for the soldiers in *Return To Eden*?

Next issue I'll be back with more hints and tips to aid you in your struggles, together with the start of a reader's lightning corner. If you'd like to be listed in *Lightning*, write in with your name, address and which adventures you can help others with.

Until then, I wish you a joyous Christmas and an adventuresome New Year.

BRILLIG'S TOP SCORE

1. *House-Maker's Guide to the Galaxy* (Infocom)
2. *Jewels Of Darkness* (Rainbird)
3. *Zork I* (Infocom)
4. *Planetfall* (Infocom)
5. *The Pawn* (Rainbird)
6. *Lords of Time* (Level 9)
7. *Prince Adventure* (Adventure International)
8. *Zork II* (Infocom)
9. *Trinity* (Infocom)
10. *Enchanter* (Infocom)
11. *Adventureland* (Adventure International)
12. *Sorcerer* (Infocom)
13. *Spellbreaker* (Infocom)
14. *Price of Magic* (Level 9)
15. *Lords of Khorne* (Vision Hall)
16. *Golden Setai* (Chaos II)
17. *Waldinger* (Infocom)
18. *Zork III* (Infocom)
19. *Morden's Quest* (Malsbourne Press)
20. *Sorcerer of Clasmorgue Castle* (Adventure International)

HINTS 'N' TIPS

ENCHANTER — Infocom

To deal with the dragon
LEP SHAD WORE HTES U

FEASIBILITY EXPERIMENT — Digital Pictures

To overcome this dragon's fiery breath

LES BLAY HSDN ANOP AEME SU

To fix the lamp

KEWADNA UOD BENU DT

THE PAWN — Rainbird

Snowman a barrier?

ETH WERA MOXE ALSO NAME DRAG DROW M

Then simply

DAT WNA ANNOH STEU M

ZORK I

Is the thief bringing you to grief in combat?

NOVA INOTS (BUD THE PAW YISA WERT

GRAD OYRE DAVOR TSDH DWA HUSY ETH DAW OMEN T

ELBA ULAY DMH TSDH BASH DRYE KYS AMMT CART BID

IT really doesn't seem twelve months since you were sitting round the dinner table tucking into that enormous Christmas turkey done it? But, 'tis the season to be jolly, and for many of our readers that means getting out all the old favourites – games which haven't seen the light of day since last Christmas. If you remember, the twelve thousand grams at Missile Command and Uncle Tom spent most of the afternoon trying to get his frog across the road. . .

For seasoned gamers the Atari will naturally be a star performer at Christmas but opens a thought for the newcomers who took advantage of the notorious Diems and Currys bargain packs during 1986. They have probably never seen Frogger much less the other classics.

The problem is that alongside these misadventures there were, frankly, a lot of rather highly priced rubbish. So if you're among that vast majority of Atari owners who don't remember the excitement of buying an original 16k Atari 800 for the bargain price of £245, read on and get a few ideas for the Christmas.

There are really only a few places to start when talking about all-time classic Atari games – and that is with Star Raiders. Released on an 8k cartridge at £34.95 (now available at under a tenth!) this game was a revelation in the computer games industry. Indeed, I know a good few

Classics for Christmas

ANDRÉ WILLEY looks at the very best games, old and new, for Atari users

concentrate. When you drop out of hyperspace your short range trackers kick back into life and with the red alert klaxon ringing in your ears you engage the aliens and the attack computer and commence battle.

As you go board space the splash damage and you run desperately low on fuel, you must choose your moment to warp out and dock with a friendly station for repairs.

Star Raiders is extremely addictive and a must for all serious games enthusiasts.

Starting with the space theme for a while, there can be few who have not seen the arcade machine Defender and the Atari cartridge is one of the closest reproductions available. You have all the excitement and speed of the original, blasting aliens like there is no tomorrow as you rescue people from the clutches of the evil genetic badies.

If you liked Defender then you'll love Drapacore. This was released a little more recently but very quickly gained the classic label. The theme is the same as Defender but this time you play a space man with a jetpack and a laser gun.

No galaxy overruns would be complete without a mention of Space Invaders and there have been a whole host of variations on this arcade standard. The closest to the original machine is probably De-Luxe Invaders from Raiders, but

Atari's own Space Invaders cartridge is pretty good too.

The Galaxiana cartridge has its merits in terms of fast moving aliens but the crown of the lot must be awarded to Steve's software. I last saw this priced at £21.95, but it was worth every penny.

Each wave of aliens is different. First is a bunch of swooping and diving craft which are quite easy to knock off, then craft that fly off into the distance every so often.

These are followed by ships made up of coloured spheres which will separate and bounce all over the place. If you shoot them down. The next wave features centipede-like



people who actually looked out their £848 gun to play this game and it still holds up well today.

Star Raiders is a space combat simulator with a through-the-viewport first display. The aim is to defend your Starbases from attack by the evil Zylon empire.

To do this you hyperdrive your space ship around the galaxy to areas which your long range tracking systems advise have a high Zylon fleet



aliens which snake their way towards you at an alarming pace.

As you progress through the levels there different types of ship going up to try to obliterate you. Accompanied by some of the most original – not to say downright rude – sound effects I've heard for years, this game is one of my all-time favourites.

One of the strongest computer games I've come across – and I highly recommend it – is **JoJoJo**. You play a wise-crack knight watching a poor aristide not a horse but a giant flagging bird.

The controls are simple – left, right and press the button to flap (gravity brings you down again, often with a bump). Combat is straightforward but, especially as a two-player game in which both riders play on the same screen, it is hard to resist for sheer enjoyment.

Moving on from the space attack games, there are a number of family



games. The most obvious of these is **Pac-Man** – which I don't really think needs any further explanation other than to say that it is one of the best versions available on any media, even today.

Frogger is another arcade classic which has made a successful move to the Atari home computer – complete with car logs, turtles and even Mrs Frog. This one still has great appeal.

Another Frogger-like game is **Peepko** – which features a little fellow who must cross the road and river in order to collect golf-balls which have gone out of bounds. Again, this has lasting interest and some pleasant music.

If you want a bit more of a challenge, look no further than **Miner 30486**. This is probably top of my own personal list of favourite arcade games, simply because there is so much to it.

You play Bounty Bob, a gold prospector who is trying to find his way through the radioactive mines. Along the way there are radioactive creatures who kill on contact, but which you can destroy after picking up certain objects – rather like Pac-Man's power pills.

The real appeal of Miner is that to complete each level you must leave your footprints on every bit of floor you can see – and that often involves

a lot of jumping about, not to mention using the transporter lifts and falling down slippery slides or just the wrong moment.

There are 10 completely different screens and 30 difficulty levels of each screen – making screen 10/level 10 an almost impossible task. This game is a must for all game-a-holics and no collection is complete without it – at its usual Bounty Bob Strikes Back \$60 on the levels and ladders theme, you should also look out for **Donkey Kong**, **Lode Runner** and **Popeye**, all of which still hold up very well today and provide hours of fun.

If you wish to add a combat element to this list you could try **Bruce Lee**, in which you take the part of our hero in trying to defeat the bad guys and exploring a temple at the same time.

The simulation enthusiasts have not been forgotten in the Atari games field, with the excellent **Pole Position** car racing game collecting well, even if it has been a little out-dated recently by **ElectricGlade**.

Flight Simulator II and **Mercenary** are both excellent 3D flight games, with Mercenary having the added bonus of the space theme and lots of exploring and bargaining to do.

Sports fans can try their hands at **Summer Games**, which is a real joystick wringer and can be very compulsive when played in a four-player. **Demolition** is good too, but I think that Summer Games just takes the edge.

Martial arts fans who were not satisfied with Bruce Lee should take a look at **International Karate**. Although only released recently this will quickly become a classic and should feature in any serious games player's collection. It allows you to take your karate more seriously with various kicks, punches and moves available to you, plus full scoring and match play rules.

That collection should see you through December 25th. However, when doing New Year's resolutions and the relatives have all gone home, how about ending down with something a bit more brain testing – and what better choice than an Infocore adventure?

Adventure is not everyone's cup of tea, but if you want one that will appeal to almost anybody, give the

Witch Hunter's Guide to the Galaxy a try. You may be wish on it right now, Christmas, but whatever else you do, you'll learn on coming back to it for one more try.

The characters are well rounded, the puzzles intriguing and interesting and the situations really vary. It took me absolutely ages to get through the screaming death on the Heart of Gold spaceship, but that feeling of euphoria as it finally and open captures any amount of often-blazing.

In this brief survey I haven't really been able to scratch the surface of the enormous number of games available for the BBC Micro. Personally I would be well worth your taking a look at such all-time hits as **Conan** or **Miss Sea Dragon**, **Emulator** and **Miss Command**.

Hopefully I have been able to give some of the latest owners a few ideas for Christmas and reminded the old faithful to dust off the cartage box, get out the spare joystick and have a very Merry Atari New Christmas. ■

The titles mentioned are available from the following suppliers:
Atari Command – *Games of Miss Sea Dragon, Defender Space Invaders, Summer Games and Donkey Kong* – *Atari*

Frogger – *Steve Co-Unit*
De Lone Invaders – *Robbie*
Sea Dragon, Demolition, Frogger, Bounty Bob Strikes Back – *Atari*

Bruce Lee, Pole Position, Lode Runner, Summer Games – *U-B Galt*

Demolition – *Steve Software*

Miner 30486 – *Galaxy Software*

Popeye – *Parker Brothers*

ElectricGlade – *English Software*

Flight Simulator II – *Sub Logic*

Car

Mercenary and Emulator – *Novagen*

Demolition – *Activision*

International Karate – *Systems Macintosh*

Witch Hunter's Guide to the Galaxy – *Atari*

Witch Hunter's Guide to the Galaxy is no longer available, but with a little hunting about readers could probably find some old stock.

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SANTA'S GROTON

Have some festive fun with
MIKE ROWE's latest game

IT'S Christmas Eve and all over the country stockings are being hung and chimneys swept in preparation for the following morning. All is happy and cheerful and the world is at peace.

But wait... at the North Pole all is not so well - poor Santa is in a panic. He's polished Rudolph's nose, checked the oil level and tyre pressure, got his AA route map ready and is about to depart when he finds the foot of his sleigh is empty. Those mischievous little elves have prised all the presents and hidden them!

Only six hours to go to Christmas Day and the presents are scattered throughout the catacombs of Santa's cave. Your job is to guide Santa around the catacombs collecting as many presents as possible before the time is up.

To make things worse, the elves have hidden several sacks of rocks where you will have to solve a puzzle to get at them. Each sack contains 10 presents so it is worth going for them, but remember that you cannot waste too much time in these rooms as Santa doesn't want to linger.

Luckily Santa has a map of the catacombs, but unfortunately it is difficult to fold and he can only see one small section at a time. So go to it - think of all the unhappy children tomorrow if you fail - not to mention the fact that your present might be in there somewhere!

Santa's Groton is a one player game where the object is to rush around the 100 screen maze collecting as many presents as possible. Each time you play a completely new maze will be created. You control Santa with a joystick at part time and to collect a present all you have to do is touch it. The time limit is displayed at the bottom of the screen.

Not all presents are necessarily desirable but you must get as many as you can before midnight. And there are 50 magic lanterns which will transport you to one of the eleven secret labs. Here you will find a sack containing 10 presents, but to get it you must solve a little puzzle.

At the end of the game the number of presents you have collected will be displayed and a rating of your performance will be given.

The program is commented with notes to give some idea of what's going on although in case on typing these can be omitted without affecting the running of the game.

The main part of the game runs on a custom Display List routine which is largely made up of Graphics 2 lines with the maze being drawn using a custom character set. Santa is made up of two player routines, thus giving him two colours. He is moved using a small machine code call stored in RAM.

Screen utilisation, the character set and the player routine graphics is done in lines 2000 to 25000 and the data for this starts at line 25000. The screen drawing routine begins at line 2000.

The main routine for the program is on lines 100 to 150 with subroutines for moving Santa at lines 50 to 60. These are put at the beginning of the program to give a little extra speed where it is most needed. Lines 200 to 500 control the puzzle solving routines.

Once you have typed it in don't forget to Save a copy before you run it. There is some machine code used which could crash the computer if mistyped.

If you have any problems typing it in, don't forget to use Ctrl+R to Right to help you - or why not download a copy from MicroLink?



TTO



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```

[illegible]

[illegible]

- Transparent to all s/w
- no driver programme necessary
- Connect direct to 600 or 800/XL
or 130 XE – or to disc drive if fitted

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ATARI MADNESS

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

2. Next, it is essential to gather relevant information and data. This can be done through research, consultation with experts, or by analyzing existing resources.

3. Once the information is gathered, the next step is to analyze it and identify the key factors that influence the outcome. This often involves breaking down the problem into smaller, more manageable parts.

4. After analysis, the next step is to develop a plan or strategy to address the problem. This plan should be based on the information gathered and the analysis performed.

5. The final step is to implement the plan and monitor the results. This involves putting the plan into action and regularly checking the progress to ensure that the problem is being effectively addressed.

6. Throughout the process, it is important to communicate and collaborate with others. This can help to ensure that everyone is on the same page and that the best possible solution is reached.

7. Finally, it is important to evaluate the results and learn from the experience. This can help to improve future problem-solving efforts and ensure that the same mistakes are not repeated.

¹² There are several good reasons why one would expect the effect of group size on the dependent variable to be a negative one. First, group size is negatively correlated with the number of group members who are likely to be involved in the decision-making process. Second, group size is positively correlated with the number of group members who are likely to be involved in the decision-making process. Third, group size is positively correlated with the number of group members who are likely to be involved in the decision-making process.



0727-72790



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I AM having problems with a data storage program on Atari.

```

10 FOR I=1000 TO 10000
20 FOR J=1 TO 5: INPUT J:
  DATA J: NEXT J
30 FOR K=1 TO 5: PRINT
  DATA: NEXT K

```

As it runs it puts out the five strings previously entered. But then jumps them up.

In saving and loading information, variable J=1 holds some numbers. After saving, loading J is the constant and keeps.

```

10 FOR I=1 TO 20:
  PUT $DATA(I): NEXT I
PRINT $DATA(15)

```

data loading works.

```

10 GET J:G
20 IF $CODE=1000
  GET J:G:GOTO 10

```

I AM not sure if you mean **code** or **key** or **data**.

Andrew Shattlesworth, Scarborough, Maine

■ The answer to your first query is easy: you are trying to use **\$DATA** as an integer, which is not what it is at all. **\$DATA** refers to a portion of a string string. **\$DATA** begins with the first character.

And **\$DATA** does not have string arrays as such, and **\$DATA(15)** simply returns the 15th character in the maximum length 64.

To get around the problem you must set up a long string say 200 characters and use subscripts to reference the elements of your string.

So, are ready to David

JUMBLED DATA STORAGE STRINGS

Shattlesworth, look at the Basic code I gave. It uses **DATA** and **PRINT** and **FOR** and **NEXT**.

The point is that I used the only string variable in Basic to hold the data. I used **DATA** to save it and **PRINT** to load it. **DATA** and **PRINT** are the only two Basic commands that can handle strings. **DATA** and **PRINT** are the only two Basic commands that can handle strings.

This is the only way to store data in Basic. It should be mentioned that **DATA** and **PRINT** are the only two Basic commands that can handle strings. **DATA** and **PRINT** are the only two Basic commands that can handle strings.

David Shattlesworth, your program should give you the list of data. How you get the

data is up to you. I used **DATA** and **PRINT** to store and load the data. I used **DATA** and **PRINT** to store and load the data. I used **DATA** and **PRINT** to store and load the data.

David Shattlesworth, I used **DATA** and **PRINT** to store and load the data. I used **DATA** and **PRINT** to store and load the data. I used **DATA** and **PRINT** to store and load the data.

Now, look at the code I gave. It uses **DATA** and **PRINT** to store and load the data. I used **DATA** and **PRINT** to store and load the data. I used **DATA** and **PRINT** to store and load the data.

The point is that I used the only string variable in Basic to hold the data. I used **DATA** and **PRINT** to store and load the data. I used **DATA** and **PRINT** to store and load the data.

David Shattlesworth, I used **DATA** and **PRINT** to store and load the data. I used **DATA** and **PRINT** to store and load the data. I used **DATA** and **PRINT** to store and load the data.

Window on the 1020

AS usual I had the best question submitted by Alan's friend. Alan's friend submitted a question about the window on the 1020. The window on the 1020 is the window on the 1020.

I was with great pleasure surprised that I found about the window on the 1020. The window on the 1020 is the window on the 1020. The window on the 1020 is the window on the 1020.

As I understand it, the window on the 1020 is the window on the 1020. The window on the 1020 is the window on the 1020. The window on the 1020 is the window on the 1020.

AS I understand it, the window on the 1020 is the window on the 1020. The window on the 1020 is the window on the 1020. The window on the 1020 is the window on the 1020.

TV time for 800XL

I AMV recently bought an 800XL computer with a color monitor and games.

There are approximately 1000 programs in the Atari 800XL line of software. I have owned an Atari 800XL before a 400.

The Atari computer has good capabilities and is a good computer. It has a good monitor and a good keyboard. It has a good keyboard and a good monitor.

Recently I have owned an Atari 800XL computer. I have owned an Atari 800XL computer. I have owned an Atari 800XL computer.

Now, I have owned an Atari 800XL computer. I have owned an Atari 800XL computer. I have owned an Atari 800XL computer.

Alan Shattlesworth, I have owned an Atari 800XL computer. I have owned an Atari 800XL computer. I have owned an Atari 800XL computer.

Missing eight squares

I AMV recently bought an Atari 800XL, with which I am pleased, but I have a slight problem.

When I use the memory test included in the 800XL's manual, it says that the memory test is 64K. It says that the memory test is 64K.

Drawing the line...

I OWN an Atari 800XL. When I use the **DRAW** command, I draw a picture. I draw a picture. I draw a picture.

It sounds as though you are trying to use **DRAW** with a text screen. As the computer can only put characters in a text screen, it does its best to

draw a picture. I draw a picture. I draw a picture. I draw a picture. I draw a picture. I draw a picture.

However, to draw a picture, you must use the **DRAW** command. I draw a picture. I draw a picture. I draw a picture.

before trying to load it back in again?

If you can't get the OS/2 version back in at all, why not try the version you loaded for use with the chessman?

If the chessman managed to read it correctly, you can install it with AMVER.C and then you can try OS/2 using it again.

If you still can't get anything to OS/2, perhaps the problem may be with your equipment.

Take both the computer and the monitor back to your dealer for testing, as the fault could be with a third — though it is more likely to be the monitor.

Translator disc

I WANT to buy a translator. Could you please advise me where to obtain one? —
Arnette Elphinst, Macclesfield, Cheshire
■ You can purchase a trans-

lator disc, which is what we think you mean, from any Atari retail centre. Typically they will just charge you (just for a blank disc and postage plus a normal supply fee.

Elusive sprites

I HAVE recently acquired an Atari 800XL and is disappointed the other Atari manuals I have also bought the Atari 80 Handbook.

Although this is rather informative it does not tell you how to create multi-coloured sprites.

Also could you advise me on books which will teach me machine code programming on the 800 — **Stephen Horton, Newcastle, Co Durham**

■ Firstly, the Atari doesn't have multi-coloured sprites so that explains why you are having problems generating them.

You can of course use two

or more sprites, and move them about together, which gives the same result. See Stephen Williamson's report about Atari Music Graphics for more details.

If you want to learn learning machine code try a book called *Machine Language for Beginners* from Computer Books which will take you through the fundamentals in fairly easy stages.

You should also consider buying a memory map, such as *Mopping the floor* from the same publishers.

All systems are go...

I'M been reading Atari User for quite a while and I've noticed an advert for 3 By Systems' *Happy Sampling System*.

Recently I've noticed that it isn't as easy as it is made out to be. I'm very interested! I'd be very grateful if you could reply

soon. — **L. Hunter, Middlesbrough, Cleveland**
■ 3 By Systems is alive and well and will supply the product you are interested in. If you drop them a line they will send you more information.

Waiting for the chop

I HOPE the next publication on Atari User is the result of System Three Software. For well over a year now we have been waiting eagerly for Jonathan Jarvis's Atari 800 stage.

You will see what I'm talking about in System Three and realizing as much I am hoping you will be able to find out how on all of the pages under the title — **Kevin Joyce, Sheffield, South Yorkshire**

■ System Three Software say that the Atari's edition of Jonathan Jarvis will be in the shops by the time you read this.

time is 8888 seconds. If however all the credits are captured every 1000 seconds a time total of about 2000 seconds is shown.

But the total is 1000, it does not seem to recognise 10000. Is there a bug? Is 10000 the max, it does not carry on from 0000 if you have one?

This is most annoying, and a great score cannot really be achieved. — **Mrs D P Remington, Bedford, London**

SIX OF THE BEST

OS/2 are some tips for Atari games, I hope that your readers find them useful.

Three Minutes' Shooting mode getting you a level? As soon as you appear on screen shoot the machine and the ground starts shaking. After the third level the ground will follow you and you will wrap to the next level.
Wheeler Deal (American) If

you haven't already realised, playing Atari and then taking will allow you to start an off-line level.

Superstar If you *Goal Allowed* When playing on the Just Jewel and you have changed your credit, if you say: I say: 35 per cent at the time this means that she has a lost level.

So if you raise 35%, the chances are that she will drop and you will win the money in the pot.

Snakehead (Moby) If your enemy is killed by the body of liquid from the roof, give it a floor like Quark and then take it back to increase your strength.

To fit the control box to the size, get the Master from PlanetMall and give it to Peter. Common. That is the size for. Common. It will have an item to help you using the wheel of command and then will fit the control box, then you can use the keyboard and ground that. The key and red

having can both be used for this.

Miscellaneous (Miscellaneous) There is a *Project Galaxy* unit in the all its contents is 48887 minutes at 08-08. When on the ground there you can find a key.

The Machine (Lustre) *Game* (Lustre) To finish the first level you need the red jewel and you can kill the dragon with red jewels.

To finish the second level you need the green jewel and you can kill the dragon with yellow diamonds.

Level 3 blue jewel green diamonds. Level 4 and end green jewels blue diamonds. Level 5 blue and green jewels, yellow diamonds. Level 6 blue and red jewels, blue diamonds.

If you find yourself running out of energy when fighting the dragon keep hitting the operator quickly to collect all the diamonds the dragon drops at you.

Keep up the great magazine — I got forward in anticipation

to the next issue! — **Mark Stephenson, Perth, London**

CHIMERA

SCAM does on Chimera. That you need a screen. You can alternate between screens with the going up or down and pressing fire.

Eliminate all enemies then get the last and go in a blue room and press the. Then you will be in a level.

Go to a corner and press the.

You are if to follow the same procedure as with the screen screen.

Behind the first screen is a key. After you can open the door. You also have to find a jacket.

Some passwords for *Chimera* follow — open them in as you begin the game.

Level 6. Fire
Level 8. Fire
Level 12. World
Level 13. Zoom

They needed. Password on Wheeland — **A. Mitchell**

interested in using some digital pictures that they just want a blank disc or Compact and more pictures and I will get some pictures on them!

If you are interested, write to me at Commodore Dealer Drive, Concord, N.Y. 14307, or phone 800-855-5000 and ask for Stephen. Hope this will help some people. **Stephen Baskin, East Syracuse**

Colour TV resolution

I WOULD be most grateful if you could answer the following questions: the best tech used the second lowest?

I am on the verge of buying a \$2000 TV. I do not want to buy a monitor — it takes a marked time in resyncing when using the RGB with a colour TV (40k Hz)?

The Atari ST is an anomaly in a class of cheap and attractive buyers should realise that they really are getting "power" without the price.

However, software for the ST is not cheap and just as many programs will not run on even the best of the other machines.

Little interest was generated in the early days because software was expensive and not aware of a computer offering more than its rivals could do in struggle to find users.

It is not possible, that current ST software prices will have a similar effect and the user market is this going to lead to prices just like it did in the early days of the 400/500?

It seems likely that a computer offering as much as the Atari should be superior to those possibilities where only a few years ago Atari and Atari programs were learning their lessons the hard way.

Also, these prices are inflated and it is not that they will improve!

Thank you for a great all round publication — **B. E. Wilson, BPP Shops, London**

■ You will find that the 512K STM can be used in both low

and medium resolution on a colour TV but that medium resolution will still be very hard to view and the details below the line become almost impossible.

However, if you can afford it, use the RGB port you will notice a distinct improvement but not to the extent that you would with a good colour monitor.

Finally, I would like to thank you for your excellent series on Great White Computers not to mention the master control box.

After building it I decided to set it up for a few days like reading me up in the evening by switching on the lights and the coffee pot and the water heater.

However, I would like to know why Atari is bringing out the Atari games like Paperboy and Double Dragon for every kind of computer except the Atari line?

We do not want to support any Atari by buying the hardware and software only to find the better new games are only available for other machines.

Missing top games

We do not want to support any Atari by buying the hardware and software only to find the better new games are only available for other machines.

We are getting a new deal? Why should we buy the software — if we can find it when Atari is looking for our money and so on.

There is no wonder people turn to piracy. If Atari users

are not permitted to even use paper.

However, I would like to know why Atari is bringing out the Atari games like Paperboy and Double Dragon for every kind of computer except the Atari line?

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Back to the beginning

I HAVE just purchased an Atari 800X, just from Games for my children.

While we can run the games that we have on the Atari, we have tried unsuccessfully to program games from a games book I feel we need to understand what we are doing from the beginning.

Can you tell me whether there are any publications which are designed for the beginner with no computer knowledge or if I should start out of getting a set up on my own?

While you have games at £7.95 in your magazine, the only problem I have found is that with a limited range starting at £5.95.

Any information you can give will be very gratefully received and hopefully allow my dream that I have made a wrong decision with this

For this reason, we have some modern bits — such as the Apple II — and even they can be approved and are quite illegal to use. You can easily connect one to your phone but not legally.

If BT finds out, I may well call you off. That said, there are lots of people who turn up with and take the risk.

To connect any modem to the computer you will require an RS232 interface such as the Atari 800 and the others software.

If you feel confident at such a task, programming you could try using the Atari 800X software to use the joystick port.

Thanks though — you might find that I have found the phone to jump around the issue like your coffee machine is it?

However, I would like to know why Atari is bringing out the Atari games like Paperboy and Double Dragon for every kind of computer except the Atari line?

We do not want to support any Atari by buying the hardware and software only to find the better new games are only available for other machines.

After building it I decided to set it up for a few days like reading me up in the evening by switching on the lights and the coffee pot and the water heater.

While you have games at £7.95 in your magazine, the only problem I have found is that with a limited range starting at £5.95.

Memory map

I WOULD like to know where I could get a memory map for my Atari 800X and Atari 800X II, would you?

While you have games at £7.95 in your magazine, the only problem I have found is that with a limited range starting at £5.95.

Any information you can give will be very gratefully received and hopefully allow my dream that I have made a wrong decision with this

NEWSLETTER

Books and bookmen

BUYING and selling rare and out-of-print books isn't as busy a business as it once was - even for a firm founded when Robert Peel was prime minister.

Antiquarian bookseller Woodson & Wadley has been trading since 1843 but is busy up-to-date when it comes to communications thanks to MicroLink.

Speed is important in handling rare publications then buying and selling them at the right price.

And as 90 per cent of the firm's business involves dealing with people in countries all over the world, MicroLink's telex and other messaging services are going invaluable.

Although we specialise in natural history, we're very willing to search for any rare books other people are looking for. Our sales director Tony Swain is a member of the family which has been running Woodson & Wadley since the 1820s.

And where great distances are involved, MicroLink is often the fastest and most economical means of doing the job.

Our clients are universities, museums and libraries, private collectors and fellow dealers - and two-thirds of them are abroad. At present most of our business with the United States is done by telephone but we should soon have an efficient transatlantic mail box system via MicroLink - and perhaps even a special internet telephone as well.

Best foot forward

groom, control procedures are a fast-expanding chain of footwear specialists in London used by the rubber industry.

Now the system is more like a sprint - thanks to MicroLink.

Colson Sports Shoes Shops have blossomed into an eight-shop chain in as many years, selling top international athletes as well as some time joggers.

It will soon be up to a

mountain of shoe leather in the various styles and rubber.

But on MicroLink, daily stock reports were relayed by hand and the shoes had to be sent from a head office, sometimes as far as three days later.

Now the information from each shop goes directly every night into Colson's MicroLink mailbox for national next morning and processing on the firm's IBM computer. Up to the minute

stock control has been achieved in these great expenses - instead of a mess with more than a Pound Organisation.

This gives a simple cost-benefit operations that are easy for the staff to pick up. Says Colson's systems manager Gerald Brown.

And two successfully written an excellent file sending procedure in OPL, my plan which speeds up the process even more.

Link grows

MICROLINK subscribers can now communicate directly with two more countries through the world's biggest dedicated mail and messaging network's Global.

Italy and Japan have joined the system bringing to 14 the number of countries offering this global service.

More free software

MICROLINK's telephones library is being expanded and considerably extended.

The programme run on five types of computer - IBM, Micro Apple, Eascom, Amn and Amstrad.

There are now nearly 150 free programs in the MicroLink telephones library and this number will be substantially increased during the next few months.

Going with a bang

HAVING RETURNED his childhood hobby of making fireworks - somewhat luckily he says - Jon Gubins has now moved on to other things.

But he never lost his fascination for colourful explosions and now with a little help from MicroLink, he's creating them all over the country.

As boss of Fantastic Fireworks Jon was responsible for something like 65,000 bangs around Britain this November 8th.

For the past two seasons Jon has been selling fireworks imported from places like Germany, Spain - and even China where pyrotechnics originated.

He keeps in touch with his suppliers via MicroLink's telex, fax lines and even electronic mail to purchase his services.

These include patented displays costing from £50 for a family, festive party to £5,000 for any of the Royal Household celebrations. I've found that sending

information via MicroLink is the most effective method of getting publicity for my company at the trade says Jon.

My displays have already been featured on Saturday Suppers and Paddy's Day on TV as a result.

Fly me...

THE Official Airline Guide database available on MicroLink includes information about nearly 30,000 hotels as well as flights and fare details for more than 750 airlines.

The coverage spans 17,000 hotels and motels in North America, more than 9,000 in Europe and more than 2,000 in the Far East and Pacific area.

Details displayed include the full postal address, telephone and telex numbers, and the range of rates plus an official classification in most cases.

The Atari Mail Order Service

DATA OPERATING SYSTEM

This will allow you to sign all known software utilities for the Atari 400/800 Computers on your 800X computer \$29.95

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